000025787

PROJECT FILE

2029 074-CC

WESTON®
MANAGERS DESIGNERS CONSULTANTS
215 UNION BOULEVARD SUITE 550
LAKEWOOD CO 80228 1842
303 980 6800 FAX 303 980 1622

16 July 1993

Ms Cindy Gee
EG&G Rocky Flats Inc
P O Box 464
Golden, Colorado 80402-0464

Subject Meeting Minutes 13 July 1993
Contaminant Selection
EG&G Operable Unit Number 1
Roy F Weston, Inc (WESTON) Work Order No 2029 074-001 0020

Dear Ms Gee

Attached are the minutes of the contractor meeting held Tuesday 13 July 1993 to discuss the contaminant selection. Please do not hesitate to call if you have any questions or comments

Sincerely

ROY F WESTON INC

Janell B Bergman

Janell B Bergman, P G , CPG
Project Manager

Michael A. Anderson, Ph D , P E
Project Director

JBB/MAA/bq
cc M D Gibson (EG&G)
Project File (2029 74-01)

eg&g\oul\mm0713.jbb

ADMIN RECORD

A-[illegible]

MEETING MINUTES
DISCUSSION OF COC ELIMINATION
EG&G, OPERABLE UNIT NUMBER 1, ROCKY FLATS PLANT
HELD 13 JULY 1993

Meeting Attendees

Cindy Gee and Dennis Smith (EG&G)
Paul Singh (MMES/RFO)
Mike Anderson, Celia Greenman, and Ken Napp (WESTON)
Diane Niedzwiecki, Jeff Swanson, Amy Johnson, and Joe Schieffelin (CDH)
Scott Grace (DOE/ERD)
Howard Rose (DOE/RFO)
Gary Kleeman and Bonnie Lavelle (EPA)
Ted Ball (PRC)

Items Discussed

1 Contaminant selection. C Gee was adamant that a decision was needed to determine what is a contaminant and requested that the discussion stay focused

2 Data set. EPA had concerns that the data set they received on diskette was not the one used for statistical summaries WESTON explained that for the statistical summary the data were Ganseckyized That is, if a value was nondetect and the detection limit was twice the contract detection limit, then it was thrown out. Otherwise the statistical analysis would be biased on the high side For the ANOVA test, there was no Gansekyizing The ANOVA tests on background and site data use the same methodology

EPA had a concern that there was a disconnect in that the number of records in the data set received on diskette was different from the number of values listed in the statistical summary Specific examples would be provided to WESTON

A discussion ensued regarding how sediment and surface water data from OU1 and OU5 would be used cooperatively The session broke for consideration of the topic C Gee asked for a consensus that the decisions would be final, and that the subject matter would not need further review After deliberation, EPA stated that if something different were decided later they would take responsibility for rescheduling.

3 Inorganic contaminant selection.
Tritium can be dismissed by reason of spatial argument.
Molybdenum can be dismissed by reason of spatial argument.
Lead will remain in debate
Arsenic can be dismissed Need to look into TDS results, if they exist, for

samples with high arsenic concentrations EPA will respond if they reconsider
Antimony can be dismissed
Mercury can be dismissed
Silicon can be dismissed by reason of spatial argument. Check to see if clay content in background and site samples was measured for possible comparison.
Barium can be dismissed only appears in sediments
Aluminum can be dismissed Will look into turbidity or TDS values for samples with high aluminum concentrations

The discussion of metals concluded with EPA conceding that they were still pondering the applicability of the methodology although they had no real problems eliminating certain metals WESTON stated that the statistical data would be reviewed for an QA/QC problems

4 Organic contaminant selection. WESTON brought up the subject of laboratory contamination samples with regard to acetone methylene chloride and 2 butanone This problem was widespread even in background samples. CDH appeared incredulous that 28% of the background samples could contain laboratory contamination. They asked how it could be determined that a compound was a laboratory contaminant and not just present in the background samples. WESTON responded that, over time the "laboratory contaminants showed much more variability than compounds known to be contaminants

5 PAHs There was a basic difference in thought of how to treat PAHs EG&G wanted to limit COCs in the risk assessment to known sources EPA wanted to consider exposure regardless of known source EG&G thought that this was an upper management decision. CDH raised the concern that they had not commented heavily on PAHs in the draft report because it was implied that they would be discussed in the risk assessment. If PAHs were dropped en masse because EG&G considered these compounds parking lot materials, it would change CDH's response to the final report. CDH suggested that PAHs be discussed in a different forum, as the issue was relevant to each OU EG&G said that this would be considered

CDH asked if the contaminants agreed on today would be those discussed in the Nature and Extent of Contamination in the remainder of the RI. EG&G concurred stating that discussions for each contaminant would be included in the RI

6 Question and Answer/Discussion period.

Time 1 10

C Gee began this period by going through topics to be discussed. She pleaded to keep meeting focused, stating, "We need decisions today

Question Kleeman Was the data set EPA received the same as what WESTON used in the statistical analysis?

Answer Anderson For the statistical summary if a value was nondetect, and the detection limit was twice the CDL, then it was thrown out. Otherwise it would bias the data. This is called Ganseckyizing the data. If the value were use it could bias the statistical analysis on the high side For the ANOVA test no Ganseckyizing.

Question Lavelle Was the same method used for background computations?

Answer Anderson The ANOVA tests on background and site data used the same methodology

Question Lavelle What about surface soil?

Question Swanson. What are the qualifiers on the data?

Answer Anderson We ll get you a list during the break.

Comment Gee We'll provide an elaborate discussion on the qualifiers in the final report.

Question Kleeman So the ANOVA tests used the same data set. Which set was used for the UTL analysis?

Question Lavelle Were the dups averaged?

Answer Anderson. Yes

Question. Lavelle What about dilutions?

Answer Anderson Explained dilution procedure

Comment Lavelle There appeared to be some disconnect when the data that we received on diskette was compared to the number of values listed in the statistical summary

Response Anderson. I would like to know specifically where the number of records is different from the number of observations in the statistical summary

Question Kleeman. What is the depth on the samples? This information is not listed on diskette

Answer — Anderson This information is provided in Appendix C. It is not provided on the diskette (Long discussion ensues regarding how samples were previously labeled to distinguish depth intervals during Phase I, II, however this procedure is no longer practiced

Comment — Kleeman. For SVOCs, the detection limit was high in many cases, but the CRDL was less

Response — Anderson This is something we have to live with The data have been validated

Question — Kleeman Well, why is the detection limit different for different samples?

Answer — Anderson. (Explains analytical procedures) I might be concerned if we were talking about PCE, but these are SVOCs.

Question — Lavelle Where are we statistically? What power statistically?

Answer — Smith We know we re on the power curve

TOPIC — Discussion begins with questioning the elimination of some analytes in surface soil.

Comment — Lavelle I'm not comfortable with some of these results Need more QA/QC

Response — Anderson. I share your concern about QA/QC. Today we want to make sure we re all on board regarding methodology (Scientific reasoning supplants professional judgment)

Comment — Gee (Summarizes the history of COCs.) On June 23, six criteria were dismissed. On July 6 the decision was made to conform to what the risk assessment people use, total metals in aqueous samples

Comment — Schieffelin (Wanted an elaboration on OU1 vs OU5)

Response — Gee If something appears in the sediment, the analyte must be tied to something on the Hillside another medium, to be considered a contaminant.

Comment — Lavelle Perhaps you should take out surface water and sediment exposure points in OU1 Otherwise you could be setting yourself up

Comment — Anderson. The sediment data show nothing extraordinary

Comment — Lavelle The FS for OU1 could be held up because the remedial action objectives will have to consider the additive risk from OU1 and OU5

Discussion ensues regarding how units across the plant are contiguous, how some overlap how data from OU1 and OU5 will ultimately be used, the zen of operable units, S Grace calls for break.

Time 2 45

Comment Grace Let s more forward.

Comment Gee (indicates on easel metals to be discussed) OK, let s start with aluminum.

Comment Kleeman. I'm not comfortable with the upper flow unit division. The values here appear to be higher than in the individual units

Response Anderson We ve gone unit by unit.

Comment Kleeman The upper flow system has higher UTLs than the parts that make it up

Response Anderson This has to do with north vs south. (??)

Comment Kleeman. I understand what you re saying, but some of these don t appear to be good numbers

Response Gee The background report was approved by EPA.

Comment Kleeman (Concern about Be and background value) (Some discussion follows)

Comment Gee Before we continue I would like some consensus that what is agreed on today is final, that we won t have to meet one or more times to conclude this issue

Comment Kleeman I'm not comfortable with saying yes or no today

Comment Lavelle I thought we were going to look more thoroughly at the rationale before actually eliminating analytes

CDH suggests break.

Time 3.30

Comment Kleeman Let s go through the list. CDH does not have a problem with the list, but they have questions

Question Singh Will we have agreement at the end of the meeting?

Answer Kleeman We are willing to let you proceed with the list. If we decide something different later we ll take responsibility for rescheduling

Comment Gee OK, then. Aluminum.

Question Swanson. Can we start at the bottom? We don t seem to be able to get past aluminum.

Answer Gee Yes Tritium?

Discussion Anderson Discusses tritium hits Concludes that numbers are different from the UTL. The values in the IHSS are not different from non IHSS values The highest value is upgradient.

Response Swanson. Good

Comment Kleeman No questions

Comment Ball Of course tritium has such a short half life there may have been considerable decay since 1986

Answer Anderson. That's true Molybdenum. (States similarly that concerns are similar not very different from background UTL, and values upgradient are not greater than UTL) Molybdenum is a good example of comparing detection limits between the site and background. Its essentially meaningless

Question Kleeman. What about the sediments?

Answer Anderson. The sediment hits are far from OU1 Any questions?

Question Swanson So is this argument a spatial case?

Answer Anderson. Yes, Case #3 Again, the concentrations are low this goes hand in hand with the spatial argument.

Discussion Gee Lead

Discussion Anderson Lead is spatial The surface soil background UTL is 44 The highest value at the site is 47 which is not a big deal. In addition, there are only 4 locations which exceed the UTL.

Question Smith What was the p value on the ANOVA?

Answer Anderson 02

Comment Smith The cutoff was 05 so if it s less than 05 it s picked up as significant.

Answer Anderson Also if its elevated in the bedrock and not the alluvial groundwater I'd have trouble calling it contaminated.

Comment Niedzwiecki There may be trouble with the background characterization value

Question Anderson Well, I'll ask a geologist. Ken, can you get contaminated bedrock groundwater without having alluvial contamination?

Answer Napp If the lower HSU is confined, you can t get upper HSU water into it except through cross-contamination or in a recharge zone I could point out that the cleanup value for lead is 500 mg/ℓ and the risk for lead is treated differently

Comment Lavelle You will make us very mad if you start talking about risk.

Comment Niedzwiecki Let s think about it.

Comment Gee Lead will remain in debate Arsenic.

Question Ball So this is another case of bedrock and not alluvial groundwater occurrences?

Answer Anderson. It s not as convincing. Discusses the problem with Well 5387 consistently high values, possible problem with completion.

Question Kleeman. What about Well 5387? Did it improve with time?

Answer Anderson. It was only sampled once More discussion follows on how this well is anomalous

Question Niedzwiecki How do you know that? How do you know it's not a hot spot?

Answer Greenman. Tries to explain to Niedzwiecki the problem not only with 5387 but with 37191 This well also had high readings, but only for one sampling period. Possible problem with completion or development. The filtered sample showed concentrations below UTL.

Question Ball Are there TDS results we can examine?

Answer Anderson. We ll look into that.

Question Gee What s the status of arsenic?

Answer Kleeman We ll get back to you if there s a big problem.

Discussion Anderson. I think that means OK. Antimony? Problem that it was not detected in background samples

Question Kleeman. Is there a regional level for Sb if the background is no good?

Answer Anderson. I wouldn t put any more stock in a regional number

Comment Niedzwiecki If the background number isn t very good, if there were not enough samples taken, that needs to be corrected.

Comment Anderson The values found at the site were below the detection limit for background

Question Niedzwiecki What was the DL for the site?

Comment Anderson Obviously lower I don t know why

Question Schieffelin So Sb was not detected in any sample, even though the range in background was 7U to 70U?

Answer Anderson That s right. The range in DL for background samples was greater

Question Niedzwiecki Well, Gary?

Answer Anderson. All we can say is that it would be nice to have a real value I don t know if that s enough reason to keep Sb on the list.

Comment Kleeman. OK.

Comment Rose I heard Gary say OK.

Discussion Anderson. OK. Mercury

Comment Ball. Another problem with DL.

Comment Lavelle But it passed both tests.

Comment Smith I don t think it's a tough sell

Comment Ball No spatial problem.

Comment Kleeman. OK.

Discussion Gee Silicon.

Comment Kleeman Silicon. It seems incredible it didn t get kicked out. No specific questions

Question Schieffelin There is silica sand in the packing material What s our argument number?

Answer Anderson Number 3 combined with temporal. It s consistently above the UTL.

Question Lavelle What about the surface soil?

Answer Anderson. It seems to be above the UTL everywhere

Comment Smith (quoting from Shacklette report) Regionally, silicon is present at up to 30% 300 000 ppm.

Comment Gee We seem to have a silicon deficiency at OU1

Question. Niedzwiecki Do the soils at Rock Creek have a different clay content?

Answer Anderson. Good point. We ll check on that.

Question Niedzwiecki In or out, based on what?

Answer Anderson Number 3 There s nothing that indicates we have a silicon load waste

Comment Kleeman. No problems

Comment Lavelle For the record, I'm not in this process, so don t even quote me

Discussion Anderson. Barium. This is not a contaminant of groundwater only sediments We can go through the same procedure for sediments, but it won t show much.

Question. Niedzwiecki. How are groundwater and sediments related?

Answer Anderson. The groundwater could discharge to a sediment area in the SID (Discussion of media ensues)

Comment Kleeman OK. We re up to the top

Discussion Anderson. Aluminum.

Comment Ball There would be more of an argument if you could correlate the values with TDS values.

Question Anderson Perhaps we could look at some turbidity measurements?

Question. Ball There seems to be a lot of hits in the IHSS Is that because there were more holes drilled there?

Answer Anderson. I don t think so

General discussion.

Question Ball Is there a better way to compare background with the site?

Answer Lavelle We re going to rely on Dr Gilbert for an answer

Comment Ball I can t help thinking if you d used a more robust method.

Comment Smith Any method will have problems

Question Gee Where do we stand with EPA?

Answer Kleeman. If we change our decisions that some of these should go back in, we would give you schedule relief

Question Grace Do you have a time frame?

Answer Kleeman. No just go ahead. I don t expect that we It s more of a fundamental problem than analyte by analyte

Comment Lavelle It s more likely that the end result won t be different. It's a methodology problem.

Question. Niedzwiecki. (referring to easel) Can you explain what STILL OUT means?

Answer Anderson. These were analytes found only in the sediments.

Comment Ball We would like to review the flow charts and the surface soils. (Be Ce U233 234

Comment Lavelle You should QA/QC everything.

Comment Anderson. Strontium appears to be significant and gets lost. It will require some review

Question Singh Can we give EPA and CDH a marked up version of the contaminant review

Answer Anderson. Yes Give me a week for QA/QC. Any comments on organics We have mostly low frequency weird compounds

Comment Ball We didn t think the data quality was good enough to know if a compound was contaminant. There were high DLs for PAHs

Discussion begins about ubiquitous acetone methylene chloride and 2 butanone even in background samples

Comment Lavelle We cannot eliminate organics based on background. That is nonnegotiable

Response Anderson We re not. There s a problem with laboratory contamination.

Question Swanson Can you present an argument for methylene chloride?

Answer Anderson. It was present in 28% of the background samples and had high variability

Question Niedzwiecki How can you differentiate between background and laboratory contamination?

Answer Anderson. (Shows time series concentrations) It does not behave like a contaminant. There is very high temporal variability

Question. Schieffelin. It was in 28% of the background samples? ONE IN FOUR??

Answer Anderson. There s another issue here If a result has a B on it, the lab believes it is real, otherwise they would put a U on it.

Question. Kleeman. I didn t see benzo(a) pyrene Is it lumped into the list?

Question. Smith We'll look and see What is the status on PAHs?

Answer Kleeman. That's one that we re pondering.

Discussion Basic schism in philosophies EG&G wants to limit COCs in the risk assessment to known sources EPA wants to consider exposure regardless of known source

Comment Smith (Parking lot argument for PAHs) We'll have to get a legal opinion.

Time 4 20

Comment Grace I think we re at an impasse We ll have to go back and talk to management. Sort of a predispute

Comment Smith We made a discussion in the draft that we believe PAHs are not waste related We made substantial discussion and caught an awful lot of flack.

Comment Schieffelin There are 2 issues 1) We did not comment on PAHs because you said they would be discussed in the risk assessment. Now if you take them out, it changes things. What I suggest we do instead is do the same thing and discuss PAHs in a different forum because it will be relevant to each OU

Comment Grace We ll consider that.

Question Schieffelin We now have come to some kind of agreement. What contaminants will go through Nature and Extent of Contamination?

Answer Gee The same Discussions will be included in the RI.

Comment Schieffelin I agree with that.